



IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): ~~An encrypted~~ A data recording method, comprising:

modulating input data for each of a predetermined unit;

selecting predetermined connection bits that are placed between two sequences of modulated data, each sequence corresponding to the predetermined unit, so that the absolute value of a DSV increases in only a predetermined region of a disc; and

recording the modulated data for each predetermined unit and the selected connection bits to the disc,

wherein the disc has a recording area including a synchronous signal area and a data area, and said predetermined region is the data area.

Claim 2 (Currently Amended): The data recording method as set forth in Claim 1, wherein the selecting ~~step~~ is performed by selecting connection bits from a plurality of patterns of connection bits so that the absolute value of the DSV increases.

Claim 3 (Currently Amended) The data recording method as set forth in Claim 1, wherein the selecting ~~step~~ is performed by selecting a predetermined code conversion table from a plurality of different code conversion tables so that the absolute value of the DSV increases and selecting connection bits in accordance with the selected code conversion table.

Claim 4 (Original): The data recording method as set forth in Claim 1,
wherein the predetermined region is an area for copy protection or security of a
recording medium.

Claim 5 (Original): The data recording method as set forth in Claim 1,
wherein when the absolute value of the DSV increases, data that is reproduced is
prevented from being normally read.

Claim 6 (Original): The data recording method as set forth in Claim 1,
wherein an error of the data causes the value of the data to vary whenever it is read.

Claim 7 (Currently Amended): The data recording method as set forth in Claim 1,
wherein the selecting ~~step~~ is performed by designating an initial value for the DSV
with an offset in only the predetermined region and selecting the connection bits so that the
absolute value of the DSV increases.

Claim 8 (Currently Amended): The data recording method as set forth in Claim 7,
wherein the selecting ~~step~~ is performed by designating an initial value for the DSV
with an offset in only the predetermined region and selecting the connection bits so that the
absolute value of the initial value decreases.

Claim 9 (Original): The data recording method as set forth in Claim 8,
wherein the offset is applied every n predetermined units, where n is any natural
number.

Claim 10 (Original): The data recording method as set forth in Claim 9,
wherein the offset is applied for each frame composed of a plurality of predetermined
units of modulated data.

Claim 11 (Cancelled).

Claim 12 (Currently Amended): The data recording method as set forth in Claim
[[11]] 8,

wherein when the data area includes a sub code recording area, the offset is applied
for other than the sample code recording area.

Claim 13 (Currently Amended): ~~An encrypted~~ A data recording apparatus,
comprising:

modulating means for modulating input data for each predetermined unit and
selecting predetermined connection bits placed between two sequences of modulated data,
each sequence corresponding to the predetermined unit;

recording means for recording the modulated data for each predetermined unit and the
predetermined connection bits; and

controlling means for causing the modulating means to select connection bits so that
the absolute value of the DSV increases in a predetermined region of a disc,

wherein the disc has a recording area including a synchronous signal area and a data
area, and said predetermined region is the data area.

Claim 14 (Original): The data recording apparatus as set forth in Claim 13,
wherein the controlling means is configured to select connection bits from a plurality
of patterns of connection bits so that the absolute value of the DSV increases.

Claim 15 (Original): The data recording apparatus as set forth in Claim 13,
wherein the modulating means has a plurality of different code conversion tables, and
wherein the controlling means is configured to select a code conversion table from the
plurality of different code conversion tables so that the absolute value of the DSV increases
and selecting connection bits in accordance with the selected code conversion table.

Claim 16 (Original): The data recording apparatus as set forth in Claim 13,
wherein the controlling means is configured to designate an initial value for the DSV
with an offset in only the predetermined region and select connection bits so that the absolute
value of the DSV increases.

Claim 17 (Original): The data recording apparatus as set forth in Claim 16,
wherein the controlling means is configured to designate an initial value for the DSV
with an offset in only the predetermined region and select connection bits so that the absolute
value of the DSV decreases.

Claim 18 (Previously Presented): A recording medium on which a plurality of
predetermined units of modulated data and connection bits are recorded, the connection bits
being placed between two sequences of modulated data, each sequence corresponding to the

predetermined unit, the connection bits being recorded in a predetermined region of a disc, so that the absolute value of a DSV increases,

wherein the disc has a recording area including a synchronous signal area and a data area, and said predetermined region is the data area.

Claim 19 (Original): The recording medium as set forth in Claim 18,
wherein the predetermined region is an area for copy protection or security.

Claim 20 (Cancelled).

Claim 21 (Currently Amended): The recording medium as set forth in Claim ~~[[20]]~~ 18,
wherein the data area has a sub code recording area, and
wherein the connection bits are recorded in other than the sub code recording area of the data area so that the absolute value of the DSV increases.

Claim 22 (Currently Amended): ~~An encrypted~~ A data reproducing method,
comprising ~~the steps of:~~

reproducing data from a recording medium on which a plurality of predetermined units of modulated data and connection bits are recorded, the connection bits being placed between two sequences of modulated data, each sequences corresponding to the predetermined unit, the connection bits being recorded in a predetermined region of a disc, so that the absolute value of a DSV increases the disc having a recording area including a synchronous signal area and a data area, and said predetermined region is the data area; and
detecting a reproduction state from the reproduced data.

Claim 23 (Currently Amended) The data reproducing method as set forth in Claim 22, further comprising ~~the step of~~:

determining whether or not the recording medium is an original recording medium in accordance with the reproduction state.

Claim 24 (Currently Amended): The data reproducing method as set forth in Claim 22, further comprising ~~the step of~~:

determining whether or not data can be reproduced in accordance with the reproduction state.

Claim 25 (Currently Amended): The data reproducing method as set forth in Claim 21, further comprising ~~the step of~~:

detecting an error state of data in accordance with the reproduction state.

Claim 26 (Currently Amended): The data reproducing method as set forth in Claim 21, further comprising ~~the step of~~:

determining whether or not data accessed a plurality of times and obtained is the same in accordance with the reproduction state.

Claim 27 (Currently Amended): The data reproducing method as set forth in Claim 21,

wherein the predetermined region is an area for copy protection or security, and

wherein the data reproducing method further comprises ~~the step of~~:

causing reproducing means to access the predetermined region.

Claim 28 (Currently Amended): The data reproducing method as set forth in Claim 22, further comprising ~~the step of~~:

prohibiting data from being reproduced when the detected result at the detecting step represents that the recording medium is a copied recording medium.

Claim 29 (Currently Amended): The data reproducing method as set forth in Claim 22, further comprising ~~the step of~~:

generating an alarm that represents that data is reproduced from a copied recording medium when the detected result at the detecting step represents that the recording medium is a copied recording medium.

Claim 30 (Currently Amended): A data reproducing apparatus, comprising:
reproducing means for reproducing data from a recording medium on which a plurality of predetermined units of modulated data and connection bits are recorded, the connection bits being placed between two sequences of modulated data, each sequences corresponding to the predetermined unit, the connection bits being recorded in a predetermined region of a disc, so that the absolute value of a DSV increases the disc having a recording area including a synchronous signal area and a data area, and said predetermined region is the data area; and

controlling means for causing the reproducing means to reproduce the predetermined region and detect a reproduction state of the reproduced data.

Claim 31 (Currently Amended): The data reproducing apparatus as set forth in Claim 30,

wherein the controlling means ~~is configured to determine~~ determines whether or not the recording medium is an original recording medium in accordance with the reproduction state.

Claim 32 (Currently Amended): The data reproducing apparatus as set forth in Claim 30, wherein the controlling means ~~is configured to determine~~ determines whether or not data can be reproduced in accordance with the reproduction state.

Claim 33 (Currently Amended): The data reproducing apparatus as set forth in Claim 30, wherein the controlling means ~~is configured to detect~~ detects an error state of data in accordance with the reproduction state.

Claim 34 (Currently Amended): The data reproducing apparatus as set forth in Claim 30, wherein the controlling means ~~is configured to determine~~ determines whether or not data accessed a plurality of times and obtained is the same in accordance with the reproduction state.

Claim 35 (Currently Amended): The data reproducing apparatus as set forth in Claim 30, wherein the predetermined region is an area for copy protection or security, and wherein the controlling means ~~is configured to cause~~ causes the reproducing means to access the predetermined region.

Claim 36 (Currently Amended): The data reproducing apparatus as set forth in Claim 35,

wherein the controlling means ~~is configured to prohibit~~ prohibits data from being reproduced when the controlling means has determined that the recording medium is a copied recording medium.

Claim 37 (Currently Amended): The data reproducing apparatus as set forth in Claim 36, further comprising:

alarm generating means for generating an alarm,

wherein the controlling means ~~is configured to control~~ controls the alarm generating means to generate an alarm that represents that data is reproduced from a copied recording medium when the controlling means has determined that the recording medium is a copied recording medium.

Claim 38 (Previously Presented): The data reproducing apparatus of Claim 35, wherein the predetermined region includes an encryption key.

Claim 39 (Previously Presented): The data reproducing apparatus of Claim 27, wherein the predetermined region includes an encryption key.

Claim 40 (Previously Presented): The data reproducing apparatus of Claim 19, wherein the predetermined region includes an encryption key.

Claim 41 (Previously Presented): The data reproducing apparatus of Claim 4, wherein the predetermined region includes an encryption key.